

The critical role of extremophiles in answering the great questions of astrobiology

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Abstract

Astrobiology focuses on the big questions: Where do we come from? Where are we going? And Are we alone? Extremophiles arguably play a large role in answering all three questions, from understanding the location and trajectory of the evolution of life on Earth, to coping with inhabiting a changing home planet. But perhaps the most important role of extremophiles in astrobiology is to understand the potential for life elsewhere. This includes the search for life resulting of an independent origin, as well as moving Earth life off planet into low earth orbit and beyond.